SECTION 100 GENERAL REQUIREMENTS AND COVENANTS

SECTION 100. GENERAL REQUIREMENTS AND COVENANTS

The following section has to do with the general description of terms used within the Department and an explanation of the general covenants required by the Department in relation to bidding and award, scope and control of work to include materials, legal regulation and responsibility to the public, as well as, prosecution, progress, measurement and payment for work completed. Because many of the Articles in this section are either self-explanatory or of value to the Resident as a knowledgeable reference only, little additional information is required.

SECTION 101. DEFINITION OF TERMS

101.07 Central Bureau of Construction (BC)

The Central Bureau of Construction is responsible for providing policies that result in quality construction, approving modifications in contracts, providing uniform contract interpretation, prequalifying Contractors and prequalifying consultants for construction engineering, processing contractor payments as well as other responsibilities associated with state highway construction.

The Bureau determines Contractors financial prequalification and work ratings for various types of construction and analyzes Contractors requests for authorization to bid on Department lettings. The Bureau bills Local Agencies, processes change orders, approves alterations in contract work and approves requests for extensions of contract time limits. Additionally, the Bureau coordinates the activity of the IDOT/Industry Joint Cooperative and chairs and/or participates in various task forces and training programs.

<u>Construction Reviews by the Central Bureau of Construction.</u> General construction policies and uniform practices are developed and administered in cooperation with the district Construction offices through the Project Review Engineers of the Bureau of Construction. Active construction contracts are inspected by the Bureau of Construction personnel at intervals during the construction season.

<u>Uniform Construction Practice.</u> With nine districts in immediate charge of construction work certain differences in the interpretation of the specifications and in construction policies may develop. In order to secure uniformity, the Central Bureau of Construction provides general review of construction work performed in all districts. This is accomplished by Project Review Engineers who are assigned and rotated among the various districts. They inspect the work at various intervals during completion. This is entirely a cooperative matter and is intended to improve the uniformity of administration of policies, interpretation of the specifications and improve the overall quality of work performed by the Department. Suggestions concerning interpretation of policies and contract requirements may be given to district construction supervisors by representatives of the Bureau of Construction. This is a sound policy and as such should be welcomed. When the suggestions conflict with the District's viewpoint as to the proper method of handling the work and cannot be resolved, a memorandum will be sent to the District clarifying the interpretation.

101.14 District Construction Engineer

The State is divided into five Regions and further divided into nine Districts as shown on the map in the Administration Section of this manual. All functions within the District are performed under the direction of the Regional Engineer, in accordance with established policies. Each Central Bureau has a counterpart function in the District. The Regional Engineer delegates to the Project Implementation Engineer the authority for supervision and administration of all highway contracts within the District from the time of execution until construction and final papers are completed. This is accomplished through the District Construction Engineer who has the responsibility to ensure the work is performed in accordance with the contract documents which consist of the contract, special provisions, plans, recurring special provisions, supplemental specifications, and the Standard Specifications for Road & Bridge Construction. To accomplish this responsibility, a Resident and staff are assigned to each contract.

The District Construction Engineer is assisted by Supervising Field Engineers. Each Supervising Field Engineer is assigned to a geographical area and some Districts have a Field Engineer assigned specifically to local Federal-aid contracts. The Supervising Field Engineers periodically review all contracts in their area to monitor progress, assist the Residents with construction problems and approve additional work within policy limits. They also conduct preconstruction conferences and perform final inspections.

District Construction Engineers and Field Engineers motivate, evaluate, organize, train, assign and equip construction personnel to properly perform their assigned duties. They also keep the public informed of the progress of construction projects and of changes in traffic staging. They ensure that public complaints are handled quickly and judiciously for all concerned parties.

SECTION 102. PREPARATION OF BID

SECTION 103. AWARD OF CONTRACT

Sections 102 and 103 were eliminated from the Standard Specifications starting with the 2002 edition. The requirements in these two sections dealt with topics prior to the actual execution of the contract and were largely duplicated in the Transportation Bulletin Notice of Letting and the department's Procurement Rules. Both of these documents are part of the contract by reference, per Article 101.09, Contract.

SECTION 104. SCOPE OF WORK

104.01 Intent of the Contract

The department, or more specifically, the Secretary of Transportation, is given authority by the Legislature, to enter into contracts for the purpose of constructing and maintaining highways, airports, and other transportation facilities. The general powers of the Secretary and the department are enumerated in 20 ILCS 2705, Civil Administrative Code of Illinois. The laws governing the methods of procuring highway construction and making changes to existing contracts are 30 ILCS 500 Illinois Procurement Code, 30 ILCS 105 State Finance Act, and 720 ILCS 5 Criminal Code. Additionally, 44 Illinois Administrative Code Section 660, Contract Procurement, promulgated under the authority of the Illinois Procurement Code, further refine the provisions for contract procurement as applied to the Department of Transportation.

Once the contract is executed (signed) by both the contractor and the department, it becomes a binding, legal relationship in accordance with the terms set out in the contract. Ultimately,

enforcement and interpretation of contract language could be determined by the Court of Claims, the final arbiter of all contract disputes.

Through the various procurement laws, the Legislature made it clear that as much as practicable, all construction contracts are to be entered into through a competitive bidding system, with awards to be made to the lowest responsive and responsible bidder. Cost-plus and force account bids are prohibited by both state and federal (when federal money is involved) law. Although specific work efforts within a contract may be paid for on a force account basis, as specified in the contract, the clear intent is to pay for as much work as possible on the basis of competitively bid unit prices.

104.02 Alterations, Cancellations, Extensions, Deductions and Extra Work

This article is the basis for the department's right to direct changes in the work. This article also states how such changes will be administered and paid.

Authorization of Contract Changes – Construction Memorandum 4

Department policy concerning approval and processing of contract changes is discussed in Construction Memorandum No. 4. This policy is designed to conform department procedures to the Illinois Procurement Code, the State Finance Act, the Criminal Code, department Procurement Rules promulgated in accordance with the Illinois Procurement Code, and Departmental Orders.

The laws and directives mentioned above apply particularly to the approval and publication of contracts and contract changes. Some of the terms used in the above mentioned laws are used in a different sense than they are in Construction Memorandum No. 4. For the purposes understanding the policy contained in this memorandum, the following terms are defined and discussed.

Contract. As defined in Art. 101.09, the contract is "the written Agreement between the Department and the Contractor setting forth the obligations of the parties thereunder. . ." The contract includes the invitation for bids, proposal, letter of award, contract form and contract bond, Standard Specifications for Road and Bridge Construction, Supplemental Specifications, Special Provisions, general and detailed plans, and any Agreements required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument."

Art. 104.01 further states that "the intent of the contract is to prescribe a complete outline of work which the Contractor undertakes to do in full compliance with the plans and specifications. The Contractor shall perform all earthwork, construct all base and surface courses, structures, and such additional, extra, and incidental construction as may be necessary to complete the work to the finished lines, grades and cross sections in an acceptable manner."

<u>Contract Quantity</u>. The total quantity of a pay item that has been approved for payment. Contract quantities may be further delineated as either "original contract quantities" or "adjusted contract quantities" to distinguish between the pay items and quantities shown on the original contract proposal (in the bid schedule) and those pay items that have been added or pay item quantities that have been increased or decreased by authorization above or below the original contract quantities.

Obligation of Funds. After a contract is executed, the funds necessary to pay for the work contemplated in the contract are available by appropriation. An appropriation is a portion of the state budget set aside by the Legislature to pay for defined goods or services. IDOT must file a Contract Obligation Document (COD) with the Comptroller in order to obligate State funds for the future payment of work under the terms of the contract. The obligation reserves a portion of the appropriation for the specific contract. The total value of this obligation is equal to the total value of the contract, as determined by multiplying the contract quantity of each pay item by the respective unit prices and summing the products.

All payments to the Contractor are made against this obligation. Total payment to the Contractor will not, in any case, be allowed to exceed the obligated amount. If the value of work performed under the contract is increased, the value of the obligation must also be increased. When final payment is made to the Contractor, the value of the obligation must be adjusted, up or down, to match the value of the final payment. The Form BC 22, Authorization of Contract Changes, is the instrument for initiating this adjustment in the obligation.

<u>Contract Change</u>. A contract change is a formal, written directive or agreement which amends a contract in order to address contingencies affecting the performance and completion of the contract including but not limited to such matters as extra work, increases or decreases in quantities, additions or alterations to plans, special provisions or specifications, and adjustments or alterations specifically provided for in the contract.

All contract changes that affect the pay items or pay item quantities are submitted to the central office on form BC 22, Authorization of Contract Changes. There are four broad categories of contract changes submitted on a BC 22. First, balancing quantities adjust the contract pay quantities, but do not change actual quantities needed to perform the work shown on the plans. Second, extra work is an addition of work that is not included in the original contract. Extra work would also include modification of the specifications for the work included in the original contract. Third, work that is included in the original contract may be deleted from the contract. Fourth, payment for the contract work may be adjusted based on the performance of the work, as provided for in the contract.

A contract change has three parts. The first part is the written approval of the change. The second part is the written directive to the contractor to perform the work involved in the change. The third part is the obligation of funds necessary to pay for that work.

To help the Department with the administration and approval of contract changes, each change requested by the districts will be classified as either Major change or a Minor change. A single contract change includes all of the various pay item quantity and funding changes involved in the changed work effort.

<u>Approval Authority</u>. The <u>Illinois Procurement Code</u> grants authority to the Secretary of Transportation, as the Chief Procurement Officer of the Department, to enter into contracts and, within limits, to modify the terms of contracts already executed. The <u>Illinois Procurement Code</u> allows the Secretary to delegate part of this authority. Only those persons to whom sufficient authority has been delegated may legally approve changes to the contract. This delegation of authority is in terms of the scope, type and value of the change contemplated.

Written Approval of Contract Changes. Before the contractor can be directed to perform any work, the work must be approved. The work included in the original contract is already approved and directed. The Illinois Procurement Code requires that when the total value of contract changes reaches a certain threshold, all subsequent approvals of contract changes will

be made in writing; the threshold varies based on the original contract value. The Criminal Code requires that when a change order, or series of change orders, increases or decreases the contract value by \$10,000, or changes the contract time limit by 30 days or more, all subsequent approvals of change orders will be made in writing. Art. 104.02 requires that all changes in the physical work or the contract quantities shall be authorized in writing by the Engineer before the work is started.

Therefore, all work to be performed under the contract will be approved in writing before any work is performed. The written approval must be signed by a person with sufficient approval authority. While the instrument of this approval may take many forms, the most common are Form BC 22, Authorization of Contract Changes, Form BC 2256, Prior Approval Authorization of Contract Change, and Form BC 329, Resident's Memo. As described later, state law requires that the written approval contain a description of the change, the reason for the change, and a statement that the change is germane and an explanation of why it is considered germane.

A special case occurs for balancing quantities, described below, in which the contract itself is considered the written approval to perform the work.

Written Directive to Proceed. The directive to the contractor to proceed with the work binds the Department to make good on the agreed payment for the work, when the work is completed in accordance with the agreement. However, those officials and employees approving the work so directed must do so with sufficient authority that will allow the obligation of additional funds, because the State cannot make payment on the work until sufficient funds have been obligated through the Comptroller.

The contract authorizes and directs the contractor to perform all the work shown on the plans, up to the contract quantity. The contractor will not be paid for any work that exceeds the lines, grades and dimensions given in the contract without direction to do so. Likewise, the contractor will not be paid for any quantities in excess of the contract quantities placed without direction to do so. Again, Art. 104.02 requires that the directive to proceed with extra work or quantities be given in writing before the work starts.

Illinois court decisions have established the following principles in determining whether a contractor may obtain payment for any extra or additional work:

- 1. the work was extra, i.e. not within the original scope of the project,
- 2. the extra work was ordered by the owner or an authorized person,
- 3. before the extra work was begun, the owner agreed to pay for the additional work, either by the words or conduct of the owner or authorized person,
- 4. the extra work was not a voluntary contribution by the contractor, and
- 5. the extra work was not necessary due to any fault of the contractor.

An essential point here is the approval for the contractor to proceed with the work, and who is authorized to give that approval. When through word or action an authorized officer directs such work, the Department becomes obligated to pay the contractor for the extra work. However, care must be taken to comply with the various provisions mentioned above.

Except in the special case of balancing quantities, described below, all directives to proceed with extra work or quantities will be made in writing. The written directive must include, at a minimum, a sufficiently precise description of the work to be performed, including references to any Standard Specifications that govern the work, and the signature of the person issuing the directive. This directive may take many forms, the most common are Form BC 22, Authorization of Contract Changes Form BC 329, Resident's Memo, or a letter or memo from the person directing the change. The written approval and the written directive may, in fact, be the same document.

<u>Balancing Quantities</u>. The contract is, itself, the written approval to perform the work described by the contract, to the "lines and grades shown on the plans," etc. However, the contract specifies the amount of work not only in terms of the final dimensions for the work, but also in terms of the contract quantities of the various pay items necessary to complete that work.

As stated in Art. 102.04, "the quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract."

The difference between the contract quantity and the actual quantity of a pay item is referred to as a balancing quantity. Because the contract quantities are recognized as estimated, as long as the balancing quantity is of a magnitude that reasonably represents, under the circumstance, the actual amount of work required by the contract, the directive to perform an additional, balancing quantity in excess of the contract quantity may be given verbally or by physical layout of the work, without the need of a separate, written directive to the contractor.

Before the contract can be closed, contract quantities must be adjusted up or down to match the final quantity of work performed, so that the obligation of State funds matches the final payment to the contractor. BC 22's that include only such balancing adjustments to the pay items are frequently referred to as balancing authorizations. Note, however, that even though the contractor may be directed verbally or by action to perform additional, balancing quantities, payment cannot be made for such quantities until an authorization (form BC 22) is submitted and approved to adjust the contract quantities.

Any contract change that affects the work to be performed under the contract, other than that needed to balance quantities, requires a specific, written directive to the contractor. The directive may be to perform extra work. The directive may also be to not perform work which is already authorized by the contract.

<u>Plan Quantity Error</u>. Technically, any difference between the estimated contract quantities and the actual quantity of pay items needed to perform the work specified by the contract is a balancing quantity. However, for the purpose of the approval authority and procedures, a quantity is considered balancing only when the estimated quantity reasonably represents the actual amount of work to be performed. The reasonableness of a quantity estimate depends on many factors, including the type of the work, the circumstances of the work, the methods used to determine the plan quantities, and, possibly, the value of the difference in quantities. Determining the reasonableness of a balancing quantity requires good judgment on the part of the Resident.

If a balancing quantity exceeds a reasonable magnitude, then this quantity is considered a plan quantity error. Dealing with plan quantity errors requires special attention.

If the error involves a significant overestimation of the actual quantity needed, the contractor is still limited to placing the work to the lines, grades, etc. specified in the contract. Two potential problems may still arise. First, even though the contractor is limited by the contract specification of the work, the Resident must be especially careful to not give any word or action that may be construed as giving the contractor sufficient direction to proceed with the extra, unneeded quantities. This implies that the Resident must be aware at all times of the progress of the work and the quantity of work that is necessary. Second, in some cases the work is not specified by dimensions in the contract but, rather, by the quantity. For example, an estimated quantity of patching or repair work may be included in the plans, without specifying the location of that work. In this case, the Resident must make sure that the scope of such work is that which was intended by the designer.

Conversely, if the error involves a significant underestimation of the actual quantity needed, the contractor is still limited by the contract quantity in the amount of work to be performed without additional direction. The main problem with this situation is that authorizing the additional quantities necessary to perform the entire work may involve increasing the value of the contract beyond what was expected when the original contract was executed. In this case, the Department will carefully consider whether the additional quantities work will be authorized, or the scope of work involved will be "deleted" from the contract. Payment for the additional quantities is governed by Art. 104.02. For significantly underestimated quantities, the Resident must again be especially careful not to give any work or action that may be construed as giving the contractor sufficient direction to proceed with the additional, unauthorized quantities.

In either case, authorization of quantities involved in a plan quantity error are governed by the levels of delegated approval authority, and require additional written approval and direction to proceed with such work.

Extra Work. As defined in Art. 101.17, extra work is "an item of work not provided for in the contract as awarded but found essential to the satisfactory completion of the contract within its intended scope as determined by the Engineer." Extra work includes both the addition of new types of work for which pay items were not included in the original proposal, as well as additional quantities of existing pay items, to pay for work at locations not included in the plans. As discussed later, work categorized as anticipated additions and unpredictable additions is also considered extra work.

<u>Cancellation of Work</u>. Although most of the discussion of contract changes in this memorandum deals with adding value to the contract, it should be noted that canceling work included in the contract also requires written approval and written direction. Cancellation of work is considered a change order, and is also covered by the <u>Criminal Code</u>. Unless otherwise directed in writing, the contractor is authorized to perform work included in the contract. Payment for partially completed work that has been canceled is covered by <u>Art. 109.06</u>.

<u>Extra Work Effort</u>. An extra work effort includes all of the various types of work necessary to produce a defined change in the project. An extra work effort may include work paid under one or more pay items.

Many of the dollar limits set by the new laws are in relation to an entire work effort, rather than the value of the individual pay item quantities that are necessary to produce the result that is the object of the extra work effort. Limits on delegation of approval authority from the Secretary of Transportation are also in relation to the type or value of an extra work effort. Because of this, judgment is required in defining the scope of a single extra work effort.

A question arises when the same type of extra work is performed at more than one location. One guideline for determining the scope of the extra work effort is that if the description and reason for the change is the same for extra work at different locations, then the work may be considered as part of the same work effort. It must be kept in mind that the law states that contract changes shall not be artificially divided so as to avoid the provisions in the law.

<u>Change Order</u>. As defined by the <u>Criminal Code</u>, a change order is "a change in a contract term, other than as specifically provided for in the contract, which authorizes or necessitates any increase or decrease in the cost of the contract or the time to completion." A change order is a type of contract change that either modifies the requirements for a pay item already included in the contract, or adds a new type or scope of work that was not included in, or anticipated by, the original contract.

For example, increasing the diameter of a storm sewer is a change in specifications and is, therefore, a change order. The pay items and quantities involve in this work effort includes the addition of the new, larger pipe, the deletion of the quantity of the original pipe, and, possibly the increase in trench backfill quantity required for the larger trench.

In the past, the terms change order and authorization have been used interchangeably. To help administer contract changes, the term change order will be used to refer only to such contract changes which modify the work called for in the contract, or that increase or decrease the contract completion time by 30 days or more (as noted in the Criminal Code). The term authorization is used more generically to refer to all the contract changes (not just change orders) submitted on a BC 22.

<u>Contract Adjustment</u>. All contract changes that are not considered change orders are referred to as contract adjustments. A contract adjustment is a change in pay items or pay item quantities needed to pay for either the actual work required to be performed to complete the work called for in the plans, or extra work provided for in the contract.

For example, contract changes to balance as-built quantities against plan quantities are considered contract adjustments. The addition of a new pay item, such as Subgrade Repair, which is called for as a contingency in the Specifications would also be considered a contract adjustment.

Change Category. To help manage the large number of changes that occur on all construction projects, the Residents will begin assigning to each authorization line item a category code representing a change category which describes the type or reason for the change. These change categories are described in detail at the end of Construction Memorandum No. 4 (see Attachments 1 and 2).

The purpose of designating the category codes is to allow statewide summary reports on the causes of contract changes. Individual authorizations already fully describe the descriptions and reasons for the changes. However, when management desires to get a sense of changes for statewide authorizations, it is impossible, practically speaking, to review and tabulate the thousands of authorizations that are approved every year. The change categories, then, provide that information in a way that allows for computer summarization and reporting, and are an important tool for managing trends in plan quality (state plans only) and state spending.

<u>Germaneness</u>. This is defined in the Department's rules promulgated under the <u>Illinois</u>

<u>Procurement Code</u>: "In relationship to the modification, alteration or amendment of the terms of a contract by [contract change], the term 'germane' means a change that is related to the

original terms of the contract but that is not so substantial a departure from the original as to constitute a new contract."

There is no exact definition of what is, or is not, germane. The whole idea behind a germaneness requirement is to promote careful planning by the person or agency before entering into a contract to purchase goods or services. The state Legislature mandates that, as much as possible, goods and services (in this case, construction contracts) be procured under a competitive, sealed, bidding system. Additional work added to an existing contract is not subject to competitive bidding. Therefore, the purpose of the germaneness requirement is to limit the amount of additional work that is uncompetitively procured.

It is clear that different people will have different opinions about what is, or what should be considered to be, germane. In reality, a judgment of germaneness is an attempt to conform to the Legislatures intent in establishing the germaneness requirement based on the various procurement requirements written into law, the specific procurement rules approved for the department by the legislative Joint Committee on Administrative Rules, and legal opinions offered by the Attorney General, and audit results from the Auditor General. As a point of reference, prior to the current Illinois Procurement Code, the Criminal Code required that all change orders be germane or in the best interest of the State or not have been determinable at the time the contract was advertised for bid. With the Illinois Procurement Code, the Legislature required simply that changes were germane. (As discussed below, the Illinois Procurement Code allows two exceptions: emergency work and small purchases.)

A contract change is considered germane if the change is within the intended scope and quantity of the original proposed contract. In this sense, germaneness determinations have a "nature of the work" aspect and a "value" aspect. A contract change is also considered germane if the change is needed to complete the work directed by the contract.

Generally, types of work that are not shown on the plans or included in specifications, and that are not required to complete the work as bid, are not germane to the contract. For example, regrading a ditch is not germane if no work of this type is included in, or needed to complete, the original contract. On the other hand, modifying the excavation quantities for regrading work included in the plans is germane, if those additional quantities are necessary to produce the drainage result clearly intended by the contract. In the same line, adding a second entrance to an adjacent property may not be germane. On the other hand, adding a field entrance that was unintentionally omitted from the plans is germane, if the entrance is necessary to allow for egress to the property, as required by law.

Work outside the physical limits of the contract is not considered germane, if the work is not necessary to complete the work in the original contract or if the work is not necessary to provide the proper performance of the work in the original contract.

Extra work efforts that significantly increase the cost of the contract may also not be germane, even though the work might otherwise be considered necessary to complete the work in the contract.

Likewise significant changes in quantities may or may not be considered germane. Modifying contract quantities to account for plan quantity errors is germane, as long as the magnitude of the change does not alter the nature of the work.

<u>Emergency Contracts</u>. The <u>Illinois Procurement Code</u> requires that all contract changes be germane to the original contract. However, the Code also provides for non-germane additions

that are determined to be of an emergency nature. For most emergencies, the emergency work must be ordered and approved by the Regional Engineer, and the departmental policy governing the change is published by the central Bureau of Operations. However, it is conceivable that during the course of an ordinary construction contract an event will occur that poses an immediate hazard to public health or safety in the vicinity of the contract, and it is the intent of this policy to empower the Resident to order immediate action if the Resident is unable to contact and district supervisory personnel. This empowerment is with the understanding that the Resident will contact supervisory personnel as soon as possible following the event. All emergency contract work requires the Regional Engineer to submit an Emergency Affidavit within ten days of ordering the work.

A non-germane contract change may be considered as an emergency change, as defined by law, if:

- 1. the situation which necessitates the change poses a threat to public health or safety, or
- 2. there is an immediate need to repair State property in order to prevent or minimize further loss or damage to State property, or
- 3. the change is needed to prevent or minimize serious disruption in State services
- 4. the change is needed to preserve public records.

To prevent abuse of this emergency clause, the Illinois Procurement Code and Department Orders require the Regional Engineer to fill out, sign and notarize Form BoBS 04, Emergency Affidavit. The Emergency Affidavit is reviewed and signed by the Secretary of Transportation. If the change exceeds \$30,000 the affidavit is also published in the Transportation Procurement Bulletin, and within 10 days of the start of the work be sent to the Auditor General for review who, in turn, reports it to the Legislature.

Emergency work constitutes a separate contract, and will ordinarily be paid for under a separate obligation of funds. However, subject to central office approval (per Bureau of Operations policy), in some cases the emergency work may be conveniently paid under an existing construction contract. In this case, the cost of the emergency work will be added to the contract using the same Authorization of Contract Change (Form BC 22).

<u>Small Purchase Contracts</u>. The <u>Illinois Procurement Code</u> defines a small purchase limit below which new contracts and contract changes will be exempt from the advertisement requirements of the Code. The Code sets the small purchase limit at \$30,000 as of July 1, 1998, and provides for adjustments for inflation to be issued on July 1 of each subsequent year. The Department rules, based upon authority in the Code, adjust this figure in reliance on the germaneness determination also set out in the Code.

In some sense, the Legislature provided a means to accomplish "small" additions to existing contracts without a requirement for germaneness. A Small Purchase is, in a technical sense, a separate contract which is conveniently paid for under the mechanisms of an existing contract. From the contractor's perspective, a Small Purchase is indistinguishable from any other change ordered under the contract and paid for in accordance with Article 104.02. However, Article 101.18 defines Extra Work as "an item of work not provided for in the contract as awarded but found essential and <u>germane</u> to the satisfactory completion of the contract within its intended scope as determined by the Engineer." (Emphasis added.) Taken together, these two

provisions (in the law and in the contract) allow for changes that are still within the realm of work that was bid on by the contractor but do not meet the stricter germaneness standards of the Illinois Procurement Code.

In point of fact, the majority of changes performed each year fall below the current \$30,000 Small Purchase threshold. Since all departmental spending is subject to the oversight of the Legislature, it is not within the best interest of the department and its mission to be seen as abusing the Small Purchase exemption as a way around meeting the overall intentions of the competitive bidding requirements. It is for this reason, that central office approval is required for approval of Small Purchases.

Now, while the Illinois Procurement Code allows non-germane Small Purchases to be added to an existing contract, these additions are still subject to the requirements of the Criminal Code and the State Finance Act. The Criminal Code still requires that for change orders a written determination be made that the change is germane or in the best interest of the State or not contemplated at the time the contract was signed. (There is a minimum threshold for this determination requirement, but as a matter of department policy all changes require a written determination.) So, if a contract change is procured as a Small Purchase (because of non-germaneness) there is still a requirement for a written determination.

FHWA Exempt vs. Non-Exempt (Full-Oversight). All State and Local Agency contracts which include Federal-Aid participation must follow all the requirements of the Federal Highway Administration (FHWA). The FHWA has active involvement in all Federal-aid (FA) projects during Phase I (planning) and Phase II (design), and they approve federal authorization for each FA project prior to the letting. On the other hand, during Phase III (construction), the department is exempt for direct federal oversight on most projects. On such "exempt" contracts, Federal law requires the State to administer the contract for the FHWA, in accordance with Federal regulations and any agreements between IDOT and the FHWA. The terms "exempt" and "non-exempt" are used to describe the FHWA's oversight role.

For FHWA-exempt projects, the department is solely responsible for ensuring that all work and procedures conform to department policy and specifications.

On non-exempt (full-oversight) contracts, the FHWA takes active involvement in all stages of planning and construction of the project. On exempt contracts, the Department administers all aspects of the contract without direct FHWA oversight.

For non-exempt (full oversight) projects, by written agreement between the department and the FHWA, the FHWA must give prior written approval of all major changes before work on the subject change is begun. (The department's agreement with the FHWA also stipulates that all time extensions must be approved by the FHWA as well as by the central Bureau of Construction.)

On non-exempt (full oversight) FA projects, prior approval of the Federal Highway Administration is required for all major changes and for all additional work efforts over \$100,000. The central bureau will advise the districts as to which contracts are non-exempt. The FHWA approval will be obtained as early as possible in the contract change development process. The district should keep the FHWA Engineers aware of pending major changes during project visits or through telephone calls. The FHWA approval must be in writing (an email or fax from the FHWA Engineer is sufficient written documentation) and the approval is to be documented on the BC 22 or on a BC 2256 submitted with the BC 22. The central bureau will send a copy of

all authorizations on non-exempt projects to the FHWA (including BC 22's that did not require prior approval by the FHWA).

State Finance Act (30 ILCS 105/9.02). The Illinois State Finance Act requires that when a single or cumulative contract change results in a net change that is equal to or greater than \$250,000 in a fiscal year, before funds may be obligated for such a change, the BC 22, Authorization of Contract Changes, must have the signatures of the Secretary, Director of Highways, Director of Finance & Administration and Chief Counsel. (Departmental Order 2-2)

To give full force to the intent of the State Finance Act, the Secretary has also ordered that for contracts with an awarded value in the range of \$200,000 to \$1,000,000, a single or cumulative change order resulting in a net change that is equal to or greater than 25% of the awarded contract amount in a fiscal year will also require the four signatures.

The State Finance Act, places direct responsibility of oversight for large changes in the value of a contract on the chief executive officers of the Department. Because this law contemplates the total value of contract changes, rather than the specific objects of the changes, it would be extremely burdensome to stop the work to obtain these signatures on the particular authorization which triggers this law. The approval procedures noted above are intended to assure full review and oversight of all changes at an appropriate level of oversight which provides assurance to these officers that valid and lawful approvals have been given. It is absolutely essential, therefore, that all persons invoking delegated authority follow these procedures meticulously, to ensure that all legal requirements and Department regulations are followed.

Therefore, the central Bureau of Construction will coordinate with the chief executive officers to obtain these signatures. It is understood that these signatures may be obtained after the work has already been ordered, when the BC 22 includes only minor changes approved at the district level. The central Bureau of Construction will obtain these signatures for all major changes before the work is approved.

<u>Determination Statement</u>. The <u>Criminal Code</u> requires that when a change order exceeds \$10,000 or adds 30 days to the duration of the work, a written determination must be made at the time of approval of the change order. The written determination must state one of the following:

- "The undersigned determine that the circumstances said to necessitate the change in performance were not reasonably foreseeable at the time the contract was signed" or
- "The undersigned determine that the change is germane to the original contract as signed" or
- "The undersigned determine that the change order is in the best interest of the unit of State or local government and authorized by law."

On the other hand, the Procurement Code requires that all additions to a contract be germane. In addition, when the value of an addition – that is, the net value of an additional work effort – exceeds certain thresholds (depending on the value of the original contract), the Procurement Code requires that a written determination be made as to why the change is considered germane.

SECTION 105. CONTROL OF WORK

105.07 Cooperation with Utilities

Many underground and overhead utilities may be located within the right-of-way. The utilities may be there by prior right or they may be there by permit. (The subject of permits is fully discussed in the Department's publication, *Accommodation of Utilities on Right-of-Way of the Illinois State Highway System.*)

As part of the design process for a highway improvement, the District will investigate and determine the presence of existing utilities within the right-of-way. All utilities within the proposed limits of construction that are to be adjusted will be adjusted either prior to or concurrent with the Department's contract construction. All known utilities are indicated on the plans.

105.07a Delays Caused by Unknown Utilities

Unknown utilities are defined as active or inactive underground transmission facilities (excluding service connections) which are not shown on the plans, not included in the proposal, or identified in writing by the Department to the Contractor prior to the letting. When the Contractor notifies the Resident of a delay caused by an unknown utility, immediate action is required. The Resident should promptly notify the district Construction office of the facts of the delay and notify the utility owner, if known.

Depending on the length of the delay, the Contractor may be entitled to compensation for labor, equipment, traffic control, increases in material or labor costs, and overhead. When such a delay is occurring, the Resident must keep accurate time records on idled labor, equipment, and additional traffic control. The use of form BC 635, Extra Work Daily Report is recommended during all minor and major delays. See the Standard Specifications, Article 105.07, for specific instructions, definitions and payment procedures.

105.07b Paying for Utility Adjustments

When the utility is on the right-of-way by prior right, the Department may enter into an agreement to pay for the adjustment of utilities that will interfere with construction. The agreement will specify the method of payment (lump sum, force account, or unit price basis). The Resident should become thoroughly familiar with the approved agreement, detailed estimate of cost, letter of authorization to proceed, and work drawings prepared by the utility. The Resident should also review Construction Memorandum No. 46, Field Control of Railroad and Utility Adjustment, for detailed instructions pertaining to the administration of the agreement.

105.10 Authority and Duties of Resident

The Resident, including all of his/her staff, is responsible for the administration of the construction and documentation requirements for the contract. S/he reports directly to the Supervising Field Engineer or District Construction Engineer. The Resident is expected to accept delegated responsibility and to make decisions within the authority delegated to him/her. A Resident's first duty is to enforce the contract and specification requirements. S/he assigns and schedules the staking and inspection and must maintain daily contact with the Contractor's personnel to efficiently provide the engineering services necessary for the Contractor's continued progress.

The Resident assures contract compliance with respect to payrolls, pay estimates, erosion control, EEO bulletin boards, traffic control, documentation, inspection and various other items. In addition, the Resident is authorized and expected to make the day-to-day decisions to the extent that his/her experience and construction knowledge permit. However, the Resident is not authorized nor shall s/he attempt to revise, delete, or change the contract provisions.

The Resident must present proposed contract, plan or specification changes or interpretation issues to his/her supervisor for review. Other involved bureaus and the Federal Highway Administration can then be notified and their approval obtained before changes are authorized.

The Resident is responsible for the accuracy of the field records and inspection reports as they are recorded. Each pay estimate approved by the Resident assures the Department that the materials and procedures used were in accordance with the specifications for each pay item paid for on that estimate.

The Resident is responsible for providing the District with an "As-built" set of plans at the completion of a contract. "As-built" plans shall fully document all field revisions, including any changes by the Bureau of Bridges and Structures, made during the construction phase of the contract. The importance of this set of plans can not be overemphasized. Maintenance activities and plans for future contracts are prepared using this set of "As-built" plans. If the "As-built" plans do not fully reflect the actual constructed conditions, additional time and money may be needlessly spent on future improvements. This is especially true of changes made on bridges and structures. The "As-built" set of plans should be so marked, dated and sent to the District Bureau of Operations. The District will transmit the plans to the Central Bureau of Bridges and Structures so that any structure changes can be verified before the plans are sent to the Microfilming Unit. The plans and a copy of the microfilm will be returned to the District.

105.10a Assignment to Field Work

A. Supplies. When assigned to a project, the Resident will receive from the District office the necessary equipment, construction forms, record books and other office supplies. The District Construction Engineer, or an assistant, will instruct the Resident in all matters pertaining to the work and explain the proper use of the material and equipment assigned.

You may be required to sign for State equipment given to you. If you receive instructions to transfer all or a part of it to someone else, do not neglect to have a proper transfer signed by him/her. You will be held responsible for equipment not returned or not properly accounted for. Employees to whom Department-owned equipment is assigned, and who through carelessness or neglect cause unreasonable depreciation or need of repairs or losses, may be charged all, or a portion, of the resulting expense as may be determined by the Regional Engineer.

When an employee leaves the Department, all Department-owned property must be returned before final warrant is delivered. This includes identification cards, Construction Manual, and all equipment which has been assigned to the employee by the District office.

Establishing Headquarters. The District office should be notified immediately of the Resident's project mailing address and telephone numbers.

B. The Public. The Resident is the Division of Highways' public relations person when dealing with the members of the general public that the contract may involve or inconvenience. The development of good public relations may avoid complaint letters written to the Governor

and the Department of Transportation concerning highway construction problems. It is important that complaints be handled as soon as possible in a tactful and considerate manner. The number of complaints can be minimized if the District and Resident keeps the public informed of the status of the work in progress.

Address comments and concerns from the public in a manner that will convey a favorable impression of yourself and the Department. Explain the work to the public insofar as necessary but carefully refrain from providing information which might be misconstrued. Refrain at all times from loose talk, gossip, or comments with respect to Departmental policies, highway program and particularly improvements which are pending or proposed.

- C. News Media Publicity. It is Departmental policy that District offices will release information directly to local news media on items of local interest in connection with highway work. It is desirable that the publication of such information be encouraged. The Regional Engineer will determine the procedure to be followed in each District for the handling of news releases.
- D. Magazine Articles. Project personnel may be approached by technical magazines for articles pertaining to construction and the writing of such articles is encouraged. All such articles must be submitted to the Regional Engineer for approval before they are sent in for publication.
- E. Letters of Endorsement. The Department receives requests for letters of endorsement of Contractors or individuals, or recommendations for machinery, materials, etc. Under no circumstances shall any employee give any letters of endorsement or recommendations of this character. Requests of this character must be referred to the Regional Engineer, along with any comments you might have, who will see to it that they go through the proper channels.
- F. Investigational Work. Field personnel assigned to investigational work must understand that investigational work of any kind is confidential and you are not authorized to discuss it with anyone outside the Department.
- G. Presence on the Job. Remember that your presence on the job is essential. When you are unable to be at the jobsite, your whereabouts should be known so that you may be contacted when needed. Situations occur where immediate contact is necessary by your office, the Contractor or your family.

105.10b Project Personnel Operation and Safety

A. General. On construction contracts, particular attention to safety is necessary when the work being performed is near traffic or in the vicinity of construction activities. It is essential that all employees and particularly those in supervisory capacities keep their safety and the safety of the employees under their direction constantly in mind and recognize the hazards that may exist in the performance of their duties. When a condition exists in which the use of protective equipment is required, it is the responsibility of the supervisor to see that the employee is furnished such equipment and that its use is enforced. It should be pointed out that it is also incumbent on the employee to use the safety devices provided, since any benefit provided under the Workmen's Compensation Law may be jeopardized where injury is caused by the willful failure of the employee to use safety devices provided. The chief of party is responsible at all times for safety procedures on survey work and s/he must ensure proper use of safety devices such as warning vests, warning devices, cones, etc. Where

the work, as performed, is not adequately protected by the contract traffic control, it will be necessary to provide supplemental safety devices and measures. When on or near the pavement, red flags should not be used for waving signals between the instrument person and the other workers. Such use might confuse the traveling public.

B. Safe Practices. Before starting work involving exposure to vehicular traffic, the supervisor in charge of the work should warn their employees of the potential traffic hazards. The supervisor should instruct all employees, and especially new employees, in the safe manner of performing the work and in the proper use of warning signs and devices. During the course of the work the supervisor will require all employees to conform to safe practices.

All employees must be constantly on the alert. They should face approaching traffic as much as possible. Never enter or cross a traffic lane without first watching for approaching cars and waiting until the way is clear.

All survey work, to the extent possible, should be conducted clear of the travel lanes. Exposure to traffic may be substantially reduced by making surveys from offset lines run on the shoulders, or at some greater distance from the pavement. Crossing of traffic lanes may be minimized by taking measurements on only one side of the highway at a time.

The taking of measurements in a traffic lane should be performed as quickly as possible and standing in or adjacent to a traffic lane should be avoided while discussing the work or while transmitting or recording readings.

Hazards associated with peak traffic volumes may be avoided by adjustment of working hours to take advantage of off-peak traffic conditions.

Necessary protection shall be provided for personnel performing such work as surveying, painting numbers on pavement, or taking of measurements from or on the pavement where the individual is unable to watch for traffic. Appropriate traffic control shall be used to direct traffic past individuals when on the pavement or within 2 ft of the pavement.

Vehicles of employees shall be legally parked 15 ft from the edge of the traveled way. Such vehicles should never be left where they may be an actual or potential hazard due to their proximity to a lane of moving traffic or by obstructing sight distance. All vehicles shall be parked on one side of the pavement. Vehicles parked 2 ft to 15 ft from the pavement edge must have strobe light operating.

The work shall be conducted in such a manner that vehicular traffic is not subjected to unnecessary inconveniences or accident hazards. When it is necessary to stop traffic, delays should be held to an absolute minimum.

The Department's *Employee Safety Code* and the Illinois Work Site Protection Manual (Other than Highway Maintenance and Traffic Crews) have additional information on this subject.

105.10c Traffic Control for State Construction Personnel

When State work forces are exposed to the hazards of traffic, the Resident shall assure their safety by providing the appropriate traffic control protection. For the specific information and current Departmental polices pertaining to personal protective equipment, traffic control and flagging, refer to the Department's *Employee Safety Code*, the Flaggers Handbook and the

Illinois Work Site Protection Manual (Other than Highway Maintenance and Traffic Crews) for specific additional information on this subject.

105.11 Duties of the Inspector

It is the responsibility of the Inspector to enforce the requirements specified in the contract documents.

It is the Inspector's job to review all phases of the work periodically including various operations being performed by the Contractor to ensure that his/her instructions are being followed and to keep the Resident well informed of progress, problems and instructions to the Contractor. Unless field inspection is aggressively carried out and well documented, the completed contract may well be of unknown quality, a potential for high maintenance costs, and an embarrassment to the Department.

The Inspector is responsible for seeing that the work is executed in full accordance with the contract documents and requirements. The Inspector is responsible for having a thorough understanding of the contract documents and requirements and for exercising good judgment. Often the Inspector's work is the deciding factor in whether or not the specified level of quality is attained. A competent Inspector is thoroughly conscious of the importance and scope of his/her work and is fully informed in regard to the contract documents and contract requirements. Armed with this knowledge and with sound judgment gained through experience, s/he will be able to insure that a high level of quality is attained in the finished work.

Fairness, courtesy and cooperativeness, coupled with practicality, firmness and a business-like manner will encourage respect and cooperation. A good Inspector and a good job of inspecting will ensure work is done in accordance with the contract requirements and will allow the Contractor to perform the work in an efficient and economical manner.

SECTION 106. CONTROL OF MATERIALS

The ultimate responsibility for the acceptance of materials lies with the Resident. Materials may be delivered with an inspection report, LA 15, Illinois OK stamp or tag or be stamped CERTIFIED by a manufacturer who has been approved by the Bureau of Materials and Physical Research. The Resident should inspect all materials to ensure that they have not been damaged in shipment and in fact have been properly manufactured. Materials which have been damaged or do not meet specifications should be rejected even though there is evidence of inspection.

Manufacturers who continually ship unacceptable material with a certified stamp should be reported to the District Bureau of Project Implementation, Materials Section.

SECTION 107. LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

107.11 Insurance Requirements for Railroad - Highway Crossings

The Contractor shall not be permitted to perform any work, on or over the right-of-way of a railroad, until the District Office has given the Resident Engineer evidence that the required railroad protective liability insurance has been approved by the Railroad(s) and has provided the expiration date of each policy. It is the responsibility of the Resident to ensure that the railroad protective liability insurance has been approved by the railroad(s) before work begins and that work does not continue past the expiration date without evidence of policy renewal.

107.12 Protection of Railroad Traffic and Property

- A Overheads. When the grade separation is an overhead highway structure, the Department designs the plans and ensures that the concerns of the Railroad are provided for. The main concerns usually are that their standard clearances are provided for, that drainage conditions are not interfered with, and any necessary changes of communication and signal lines and signals are given due consideration. Department plans are always submitted to the Railroad for its approval insofar as it is affected. In the case of open abutments, the Railroad will object to having the toe of the slope approach too close to any ditches or drainage. It has been necessary, in a few cases, to build small retaining walls parallel to the tracks, or place proper drainage facilities in the Railroad ditches, but any design change shall not be implemented until after consultation with your supervisor. Plans developed by the Department are checked by the Railroad for design and clearances. An authorized representative of the Railroad shall be invited to attend the preconstruction conference. The Contractor's progress schedule, falsework arrangement and proposed equipment shall be made known to the Railroad representative at the preconstruction conference so that s/he may have full knowledge of the work.
- B. Subways. The Railroad is more vitally interested in subway structures than in overheads and usually puts a full-time or part-time engineer on the work. Plans for subway structures are sometimes designed by the State, though more often they are designed by the Railroad. Plans designed by the Railroad are checked for design and clearances by the Department.

The specifications used shall be:

- 1. Those of the Railroad taken bodily (AREA specifications);
- 2. area specifications;
- 3. a modification of these: or
- 4. a modification of the State's specifications.

In any case, Section 100 of our *Standard Specifications for Road and Bridge Construction*, General Requirements and Covenants, is always included if the State is a party to the contract. The building of the structure is done in accordance with the provisions of the agreement between the railroad company and the Department in the following ways:

- 1. The State may award a contract in the usual way, the Railroad not participating at all;
- 2. the State may award a contract for a portion of the work, arranging with the Railroad to do the remainder either by contract or with its own forces on a force account basis;
- the Railroad may do the entire job with its own forces on a force account basis;
- 4. the Railroad may award a contract for a portion of the work, doing the remainder with its own forces on a force account basis, the State doing none of the work; or
- 5. the Railroad may award a contract for all the work involved, the State not participating.

The Contractor's working plans, etc., if a State contract, should be made known to the proper railroad company's official as stated above for overheads.

C. Grade Crossings.

- 1. Approach Grades. The design of approach grades to railroad crossings should have been discussed with and accepted by the Railroad prior to the letting of a contract. A considerable length of time usually elapses between the field checking of the plans and the awarding of the contract. During the time lapse the railroad may have adopted changes of policy. Wherever our highway crosses a railroad at grade you should get in touch with the Railroad Division Engineer and mutually agree whether or not any changes in the grade of the track are to be made. You should be familiar with the drainage situation in the area of the crossing, so that any anticipated changes can be discussed with the Railroad.
- 2. Surfacing and Drainage. There may be cases where the State is obligated to assume the expense involved in changing the grade of the Railroad tracks and to provide a surface over the tracks. Normally, resurfacing of the grade crossing proper (that portion of the grade crossing over the crosstie area plus an additional 24 inches outside the outer rail) for the full width of the pavement, plus usable shoulder, remains an obligation of the railroad in accordance with General Order No. 138 issued by the Illinois Commerce Commission, effective August 22, 1973. (92 IL Admin. Code Chapter III 1535)

The riding quality of the grade crossings proper should be equal to the adjacent highway surface. This depends almost entirely upon the original construction or any major reconstruction of the surface. It is important that quality materials and approved methods of construction be used.

Adequate drainage is essential. This may involve the use of additional drainage structures or other facilities as the work progresses. The drainage configuration is usually specified in the Railroad agreement. Any changes in the drainage configuration from the Railroad agreement will require written approval by the Railroad.

3. Types of Surfacing. The actual surfacing of a grade crossing proper is usually accomplished by one of the two following methods: (a) the use of prefabricated rubber or concrete surface materials or (b) the use of timber and/or asphalt crossing materials.

Surfacing should be given the same careful inspection required in the State specifications to ensure proper materials, thorough mixing and compaction, and satisfactory smoothness. The Bureau of Design & Environment Manual, Chapter 7, Section 3.02(f) states – "Where the roadway traffic equals or exceeds 1000 ADT, use prefabricated rubber or concrete surface materials. For ADT less than 1000, timber and/or asphalt crossings may be used." The Resident Engineer can obtain a list of approved grade crossing materials for a specific grade crossing from the District Project Support Engineer. The Resident Engineer can also obtain valuable information relative to the acceptable methods of installing the grade crossing material from the District Project Support Engineer.

These suggestions apply to all grade crossing surface installations paid for by the State, however the Railroads are making the improvements at their expense, every effort should be made to secure their cooperation in the use of Department approved

materials and to perform the work in a manner that provides lower crossing maintenance costs and greater safety.

D. Inspection. In addition to having a set of plans and a copy of the contract for either overheads or subways, you must have a copy of and be familiar with the Commerce Commission Order, the agreement between the Railroad and the Department; and the detailed estimate prepared by the railroad company showing the work which is to be performed by the railroad and its estimated cost. If you do not have copies of these papers, ask the district office for them. You cannot properly inspect or approve any of the work without being familiar with the content of the papers mentioned. All of the items in this section are covered only in a general way and it must be understood that each construction section is governed by whatever is set forth in the documents mentioned above.

The Railroad's Engineer. The Railroad Engineer's will probably keep in close touch with the work. S/he should be welcome at all times and given your full cooperation in all matters pertaining to construction. It is your duty to see that all work performed under your contract on the railroad company's right-of-way is done in such a manner as not to interfere with the movement and safety of trains. Wherever the safety of railroad traffic during construction is concerned, the Railroad Engineer will have jurisdiction, and his/her decision as to methods, procedure and measures used shall be final. The Contractor should submit sheet piling designs, demolition plans, beam erection plans, etc. for the Railroad Engineer's review and approval well in advance of performing the work to allow ample review time.

Subways. In the case of a subway where the railroad company's design and specifications, either in whole or in part, are used, the Railroad may have a full-time or part-time Engineer on the work. Your inspections in this case, if a State contract, will be the same as on regular State work, except that your interpretation must be based on the Railroad specifications, as set forth, in the contract and not on the Department's specifications.

Railroad's Contract. If the railroad company makes the contract, its Engineer is in responsible charge and will give the construction detailed inspection. It is important for you to keep in touch with all phases of the work. You should work in harmony with the Railroad Engineer and offer them your full cooperation, but in case of serious differences of opinion, objectionable practices or violations of the specifications, you should report immediately to your supervisor. You should be careful to give the Railroad's Engineer definite information as to the alignment and grade of our roadway. Occasionally, there are instances where the railroad starts work before receiving this information, with the result that the structure is not laid out in harmony with the entire design. As soon as the district office has received notice of a railroad grade separation, arrangements should be made with the proper Railroad officials to discuss the location. Arrangements should be made to set permanent stakes and bench marks as may be necessary for the structure to be built in harmony with the pavement plans. An occasional check on these lines and grades is suggested.

State's Responsibility. When the Federal Government participates in the cost of the work, they look solely to the State for proper inspection and execution of the work, as well as for compliance with all Federal restrictions and regulations, even when the State is not a party to the contract. They will not deal directly with the Railroad.

Change from Specifications. The question arises as to how much deviation you should permit from the Railroad specifications and how closely the work should conform to them. You should follow their specifications as closely as if they were our own, and on the question of minor

details you are permitted to use your own judgment in variations encountered by either yourself or the Railroad Engineer, a decision should be obtained in writing from the Regional Engineer and the Railroad's Division Engineer. We will cooperate with the Railroad representative and will be willing to consider suggestions, but in no case shall major changes in the approved plans or specifications be made without the consent and approval, in writing, of the Regional Engineer and the Railroad's Division Engineer.

State's Contract. When the contract is between the Department and the Contractor, the Railroad Engineer has no authority to overrule you or the Specifications. Matters pertaining to the safety of the railroad company should be brought to attention of your supervisor. The Railroad cannot grant concessions or make any change in the contract without the approval of the Department. In this case, the Railroad has no authority over the Contractor except through the Department.

Temporary Crossing. In case it is necessary to construct a temporary Railroad grade crossing for the convenience of the Contractor, it is the Contractor's responsibility to obtain an agreement with the Railroad concerning its construction, maintenance, and protection. The cost of providing the flaggers for use on this crossing shall be paid by the Contractor.

Bills. Refer to Construction Memorandum No. 46, Field Control of Railroad and Utility Adjustments, to familiarize yourself with the proper procedures for recordkeeping for railroad adjustments.

When the Railroad does any part of the work with its own forces or provides flagging protection, excepting for a temporary crossing, it is necessary that you have such records which will enable you to check all items when the bill is sent to the district office for approval. Such work is usually done on an actual cost basis not expected to exceed the estimated sum. Use the detailed estimates, as prepared by the Railroad, in checking the work performed by them. The railroad should not be

permitted to perform any work not shown in the railroad agreement or on these estimates with the expectation of being reimbursed by the Department unless the Railroad agreement is amended to reflect the additional or changed work. If the Railroad insists on improvements not indicated in the Railroad agreement or in the estimate, they must be made to understand that the work will be at their own expense. Railroads have only the actual costs of construction of the work described in the Railroad agreement available to them and the Department will pay only the actual costs even though it underruns the estimated cost. Most Railroads have approved schedules for the allowable rates for service and supplies. The district office should give you a copy of this.

Federal Participation. Agreements between the State and the Railroad covering work which is to be done by the railroad at State expense on projects in which the Federal government participates; usually stipulate that the Railroad will be paid only those charges which are approved by the Federal Highway Administration for reimbursement to the State. When the work is to be paid entirely from State funds, reimbursement to the Railroad is determined by the terms of the agreement.

Resident's Responsibility. The particular responsibility of the Resident in connection with railroad bills is to keep a record of materials used and labor employed, including non-temporary crossing flagging costs, as the work progresses, so that when the bill is presented to him/her for checking, s/he will be in a position to approve the charges as to the amount of materials and labor used. The cost of materials and the rates paid for labor will be determined by an audit of the Railroad's books and need not be checked in detail in the field. The Railroad should be

instructed to submit to the district office copies of all bills on their letterhead. If the agreement provides for progress payments before the work is completed, the bills should be consecutively numbered and should show clearly the dates of the period of time covered by each billing. The final bill should be marked "Final."

State Audit. Before final reimbursement is made for Railroad force account work, in excess of the original estimated cost, representatives of the Bureau of Accounting and Auditing will make an audit of the Railroad accounts which support the bill. Such accounts must be kept in a manner that may be readily audited and actual costs readily determined. The Bureau of Accounting and Auditing makes an extensive check of all force account bills which are submitted by the Railroad or public utilities. You should have enough information to check all of the items in the Railroad bill. If enough information is not available, you should check the quantities of such items on which you do have information, and forward the bills along with a letter of explanation covering the items for which you are unable to check to the district office. This will be forwarded to the Central Office for verification.

107.32 Furnishing Right-Of-Way

- A. Unacquired. When the right-of-way is not clear, the contract proposal calls attention to the fact and lists the tracts not clear, giving their station numbers. It states definitely that the Contractor shall not undertake any work which would encroach upon private property until after s/he has been notified by the Department that the necessary right-of-way has been acquired. You should see that the Contractor's operations are in accord with these instructions.
- B. Agreements. The district office should have in its file all right-of-way stipulations and agreements. These papers frequently provide that certain definite things are to be done by the Department for the owner at the time the road is built. You should be given a copy of all such special agreements when you are assigned to the job. Property owners should be notified in writing to move fences, buildings, etc. This should be done as soon as possible after the contract is executed and the Contractor should be cautioned not to enter property before the owners have been notified nor before the expiration of the time limit as noted in the conveyance statements. Most Districts have a standard form of notification to property owners.

SECTION 108. PROSECUTION AND PROGRESS

108.01 Subletting of Contract

The Resident should be aware of all subcontractors which are to do work on the project. S/he should retain a copy of the Request for Approval of Subcontractor, Form BC 260A, in the project file. S/he should also be aware if the subcontractor is a Disadvantaged Business Enterprise. No subcontractor should be allowed to start work until Form BC 260A is approved. A subcontractor cannot be approved without a current Subcontractor Registration Number. Review Construction Memorandum No. 30, Policies and Procedures for Approval of Subcontractors.

108.02 Progress Schedules

The progress schedule is the contractor's statement of how he or she intends to complete all of the contract work within the contract time limits. The initial schedule (also referred to as the "original" or "baseline" schedule) should reflect all of the contract requirements and existing

conditions as known at the time of bid. The amount of detail included in the schedule should correspond to the complexity of the project work or conditions. The schedule is an essential tool for the proper charging of working days by the Resident during the work, and it will also be essential if any issues of delays develop during the work.

When the contractor submits the initial schedule for approval, the district will be responsible for reviewing and approving the schedule. The schedule does not in any way modify any other requirements of the contract. However, as a practical matter, an improper schedule approved by the district can bias any later discussions concerning delays, so it is important for the reviewer to carefully consider all aspects of the work involved in the contract and whether the schedule adequately accounts for all of that work. Since the contractor is fully responsible for scheduling his or her resources to complete all of the work, the contractor has considerable latitude in preparing his schedule with respect to the sequence of work, rates of progress, etc., subject to any specific contract requirements. Obviously, though, items of work that are physically dependent on a particular sequence of work, must be shown in a logical sequence on the schedule (e.g. typing rebar before placing concrete).

For administering the progress of the work and the contract time limits, the schedule is most useful if it is an accurate

108.03 Working Days (and Weekly Reports)

The proper charging of working days is one of the most important duties of the Resident. Equally important is the review by the Contractor of your Weekly Report to determine if an objection exists. Working day charges (for working day contract) and Workable days (for completion date contract) are to be shown on your Weekly Report, Form BC 239. It is a contract requirement for the Contractor to submit a progress schedule for every working day contract or calendar completion date contract. The progress schedule lists the controlling items and the expected daily rate of progress to complete the work on time. To properly monitor the progress on both types of contracts, working day charges must be shown on the Weekly Report. Be sure to familiarize yourself with Construction Memorandum No. 28, Administration of Contract Time for Working Day Contracts - Articles 108.03, 108.04,108.05 and 108.08. If the Contractor's work is more than 10 working days or 14 calendar days behind the Progress Schedule, a new Progress Schedule must be submitted.

Generally, the Resident Engineer is required to make entries in the Project Diary and submit Weekly Reports of the Resident from beginning to end of the physical work on the project (see Documentation Section). However, the Resident can suspend preparation and submission of the Weekly Reports if all work on the project is officially suspended by the department per Article 108.07, Suspension of the Work, or during contractor-initiated winter shutdowns. To suspend Weekly Reports, the Resident should enter the date of suspension in the "Suspension" field of Form BC 239, Weekly Report of Resident, and make a note in the summary of operations area of the report such as "Weekly Reports suspended during contractor's winter shutdown." When normal work resumes, submittal of Weekly Reports should also resume, and the Resident should enter the date in the "Resumed" field of the Weekly Report. Weekly Reports do not have to be submitted after the work is reported as 100% complete.

Some contract work items have establishment or performance period that may extend beyond the completion of all of the physical work on the project. The specifications for these establishment or performance periods typically allow the contractor to submit a performance bond in order to allow the rest of the contract to be finaled out.

Per Article 105.13, Final Inspection, the "date of final inspection" is the date that all work, including cleanup and punch list, is completed. Per Article 107.30, Contractor's Responsibility for Work, "the Contractor shall protect and maintain the work until the date of final inspection is provided in writing to the Contractor" on the Weekly Report of the Resident, if the contractor does not provide a performance bond for those work items.

108.06 Labor, Methods and Equipment

The approval of any type of equipment or a new method of construction shall not be given by the Resident without first referring the matter to the Central Office through his/her district office. This policy enables the Engineer of Construction to assure uniform construction practices. The Department may have the proposal under consideration and may not be in a position to render a decision until more information is available. When new equipment and methods have been approved, the Resident will keep a record of the performance of the equipment and the results obtained. This information will then be incorporated into a detailed report which will be sent to the Regional Engineer, who will send a copy to the Central Bureau of Construction. This report will also contain any conclusions or recommendations that the Resident and District may have.

SECTION 109. MEASUREMENT AND PAYMENT

109.04 Payment for Extra Work

The Department reserves the right to require the performance of extra work in order to satisfactorily complete the contract work. It is in the best interest of both the Department and the Contractor to anticipate extra work whenever possible. The Resident should try to discuss options for completing any extra work with both the Contractor and Field Engineer. In no way shall a Contractor begin this work without written authorization from the Engineer. Refer to Article 104.02 Payment for extra work:

- A. Lump Sum or Agreed Unit Price. Either you or the District office shall receive a letter from the Contractor proposing payment for extra work at a Lump Sum Price or an Agreed Unit Price. This request is forwarded to an estimator who either approves or rejects the price. If the Lump Sum or Agreed price is approved, the Contractor shall be given written confirmation of the approved method of payment and permission to proceed with the work. If the request is denied, one of two things will happen. Either, the Contractor may resubmit the proposal with changes or the Department will direct the Contractor to proceed under a force account basis.
- B. Force Account Basis. If it becomes necessary to do extra work under a force account basis, the Contractor shall do the work in the most expedient and economical manner possible. This shall be discussed before the work actually begins. In this discussion the labor force required, equipment to be used, as well as any material needed, will be decided upon. After these issues are resolved, the extra work may proceed. Each day that the Contractor proceeds working on the extra work an Extra Work Daily Report, Form BC 635, shall be filled out. The BC 635 shall then be signed by both the Contractors and Department's representatives. The original shall be given to the Contractor for future billing and a copy retained in the job file. Upon receiving the force account billing from the Contractor, the Resident shall check it for accuracy with the Extra Work Daily Report, Form BC 635, in the job file. The Contractor billing should resemble that shown in the Documentation Section of this manual. Once checked, processing for payment may proceed. An authorization or prior approval for an estimated amount shall be processed before the work is to begin.